REMARKS

This Response is submitted in reply to the Final Office Action dated April 30, 2009. Claims 1 to 38 are pending in the present application. Claims 5, 14, 23 and 31 are hereby canceled without prejudice or disclaimer. Claims 1 to 4, 6 to 13, 15 to 22, 24 to 30 and 32 to 38 are hereby amended. No new matter has been added by such amendments. Claims 1, 10, 19, 28 and 35 to 38 are in independent form. Please charge Deposit Account No. 02-1818 for all payments due in connection with this Response.

The Office Action rejected Claims 4, 6, 8, 13, 15, 17, 22, 24, 26, 30 and 32 under 35 U.S.C. § 101 and stated that the claimed invention is inoperative and therefore lacks utility. Applicant has amended Claims 1, 4, 6, 8, 10, 13, 15, 17, 19, 22, 24, 26, 28, 30, 32 and 35 to 38 and submits that these amendments overcome these rejections.

The Office Action rejected Claims 1 to 38 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,536,144 to Markandey et al. ("Markandey") in view of U.S. Patent No. 5,548,648 to York-Smith ("York-Smith") further in view of U.S. Patent No. 7,278,031 to Best ("Best"). In view of the clarifying amendments made herein, Applicant respectfully disagrees.

Markandey discloses a data protection system. The Abstract of Markandey discloses:

> A method of communicating from a transmitter to a receiver over a communication medium. For the transmitter, the method includes the step of formatting data into a data stream to be communicated across the communications medium. This data stream comprises a plurality of headers (PACK HEADER). Moreover, for each of the plurality of headers, the method performs two steps. First, the method modifies information encoded by the header by performing a bitwise logical operation between selected bits of the header (B) with a predetermined bit pattern (A). Second, the method transmits the plurality of headers on to the communications medium. For the receiver, the method includes the step of receiving the plurality of headers from the communications medium. Additionally, for each of the received headers, the receiver recovers the information encoded by the header.

Column 6, lines 4 to 16 of Markandey discloses:

> Some specific items of the presently defined CIP format for the 188-byte Motion Picture Engineering Group (MPEG) transport stream packets are not compatible with the larger DVD 2,048-byte "pack" which is a subelement of a program stream packet. If the data block size (DBS) is assumed to be the 64-bit DES encrypted data block, then the fraction number (FN), quadlet padding count (QPC), and data block counter (DBC) will need new definitions. In addition, the

format ID (FMT) value for MPEG needs to be clarified that it is for the MPEG transport stream in addition to adding a new value to indicate the 2,048-byte DVD programs stream packet. (Column 6, lines 4 to 16).

York-Smith discloses an encryption method and system. The Abstract of York-Smith discloses:

> The present invention provides a simple encryption method and system for encrypting data into a plurality of control and encrypted data blocks. The data to be encrypted is divided into data segments which can be of varying length. Each control block comprises the information necessary to decrypt the data contained in the encrypted data block, such as the encryption function and associated key used to encrypt a data segment, the start position of an encrypted data segment within the encrypted data block and the length of the encrypted data block. Both the control block and the encrypted data block are padded with random numbers and the start position of the encrypted data with the encrypted data block can vary.

Column 3, lines 43 to 65 of York-Smith disclose, with emphasis added:

> The fields of the encrypted data are as follows:
> L_1 =the length of an encrypted data block (EDB),
> S=the start position of an encrypted data segment (EDS) within an encrypted data block,
> L_2 =the number of bytes in a data segment (DS) to be encrypted,
> F=an indication of the encryption function used to encrypt a data segment,
> K=an indication of the encryption key used to encrypt a data segment,
> EDS=an encrypted data segment, and
> X=random numbers.
>
> The encryption function in conjunction with an encryption key translates each byte of the data segment into a corresponding encrypted byte and can be represented generally as EDS=F(K,D) where EDS and K have the values indicated above and D is the data segment being encrypted. The mapping of D to EDS can be selected arbitrarily and does not have to be performed on a byte by byte basis.
> Examples of suitable encryption functions are:
> 1. EDS=K exclusive-or D,
> 2. EDS=shift left D by K bits,
> 3. EDS=re-arrange the order of the bits in D.

Best discloses a secure distribution of potable game software. The Abstract of Best discloses:

> Game software for use in video game systems can be downloaded from Internet servers to game consoles in encrypted form to protect the software from being copied by software pirates. A small but essential part of the game software can be encrypted for use with a larger amount software that is not encrypted. The encrypted portion is downloaded into a secure cryptoprocessor preferably in a memory cartridge that plugs into a game system. This cryptoprocessor decrypts the downloaded software, stores it in on-chip EEPROM and then executes it, all in the same cryptoprocessor. The non-encrypted software is processed in the game system by a conventional processor which depends on data generated by program instructions decrypted and executed in the secure cryptoprocessor.

Page 9 of the Office Action stated that Markandey discloses:

> PID data storing the data-type information within the transport stream packet ("The format ID value for MPEG transport stream." See Markandey col. 6 lines 4-15).

Pages 5 to 6 of the Office Action stated:

> It would have been obvious to one of ordinary skill in the art at the time of the invention to Markandey to include scrambling using Exclusive-OR computing processing of the content and a previously set settings value or a value calculated based on this settings value such as that taught by Yorke-Smith in order to provide encrypted data which is difficult to decrypt by an unauthorized recipient and which also has a relatively short encryption axed decryption time (See York-Smith col. 1 lines 44-47)
>
> Best discloses recording a table with tags to indicate which address ranges are reserved for encrypted or non-encrypted data on an optical disc (See fig. 1 ref. no. 43 and col. 8 lines 59-64).
>
> It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the above stated combination of Markandey and Yorke-Smith to include a table describing locations of the content executed in the Exclusive-OR computing processing such as that taught by Best in order to distinguish encrypted data from non-encrypted data on the optical disc (See Best col. 8 lines 59-64). Regarding Claims 2, 11, 20, and 36-38:

Amended Claim 1 is directed to an information recording medium manufacturing method which includes, among other elements, acquiring a scramble rule to apply to content to be recorded on an information recording medium, wherein said scramble rule describes a previously set settings value; generating scrambled content by executing scrambling processing as to the content, according to the acquired scramble rule, wherein the scrambling processing includes

Exclusive-OR computing processing of: (i) content data which includes PID data including a data-type information within a transport stream packet; and (ii) said previously set settings value or a value calculated based on said previously set settings value; and recording: (a) the generated scrambled content; (b) a table describing locations of the content data which includes said PID data including said data-type information within said transport stream packet executed in the Exclusive-OR computing processing; and (c) the scramble rule applied to the content which includes said PID data including said data-type information within said transport stream packet, onto an information recording medium. Applicant submits that even if properly combined, Markandey, Yorke-Smith and/or Best do not disclose the combination of the foregoing elements.

As described above, Yorke-Smith discloses the following example of an encryption function: an encrypted data segment (EDS) = an indication of the encryption function user to encrypt a data segment (K) exclusive-or data segment being encrypted (D). Such an encryption function does not teach or suggest an exclusive-or processing of: (i) content data which includes PID data including a data-type information within a transport stream packet; and (ii) a previously set settings value or a value calculated based on said previously set settings value. Additionally, it would not have been obvious to one of ordinary skill in the art to modify Markandey, Yorke-Smith and Best to result in such an information recording medium manufacturing method without reasonably being construed as improper hindsight reconstruction. On the other hand, the information recording medium manufacturing method of Claim 1, includes, among other elements, generating scrambled content by executing scrambling processing as to the content, according to the acquired scramble rule, wherein the scrambling processing includes Exclusive-OR computing processing of: (i) content data which includes PID data including a data-type information within a transport stream packet; and (ii) a previously set settings value or a value calculated based on said previously set settings value.

For at least these reasons, it is respectfully submitted that independent Claim 1 is patentably distinguished over Markandey in view of Yorke-Smith and further in view of Best and in condition for allowance. Dependent Claims 2 to 4 and 6 to 9 depend directly from amended independent Claim 1 and are also allowable for the reasons given with respect to Claim 1 and because of the additional features recited in these claims.

Independent Claims 10, 19, 28 and 35 to 38 each include certain similar elements to independent Claim 1. For reasons similar to those discussed above with respect to independent Claim 1, independent Claims 10, 19, 28 and 35 to 38 (and dependent Claims 11 to 13, 15 to 18, 20 to 22, 24 to 27, 29, 30 and 32 to 34) are each patentably distinguished over Markandey in view of Yorke-Smith and further in view of Best and in condition for allowance.

An earnest endeavor has been made to place this application in condition for formal allowance, and allowance is courteously solicited. If the Examiner has any questions regarding this Response, Applicant respectfully requests that the Examiner contact the undersigned.

Respectfully submitted,

K&L GATES LLP

BY _____

Thomas C. Basso
Reg. No. 46,541
Customer No. 29175
Phone: (312) 807-4310

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